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The terminal Permian in European Russia: Vyaznikovian Horizon, Nedubrovo Member, and Permian–Triassic boundary

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Abstract

© 2016, Pleiades Publishing, Ltd.The comprehensive analysis of the data obtained on terrestrial vertebrata, ostracods, entomologic fauna, megaflora, and microflora in deposits of the Vyaznikovian Horizon and Nedubrovo Member, as well as the paleomagnetic data measured in enclosing rocks, confirms heterogeneity of these deposits. Accordingly, it is necessary to distinguish these two stratons in the terminal Permian of the East European Platform. The combined sequence of Triassic–Permian boundary deposits in the Moscow Syneclise, which is considered to be the most complete sequence in the East European Platform, is as follows (from bottom upward): Vyatkian deposits; Vyaznikovian Horizon, including Sokovka and Zhukovo members; Nedubrovo Member (Upper Permian); Astashikha and Ryabi members of the Vokhmian Horizon (Lower Triassic). None of the sequences of Permian–Triassic boundary deposits known in the area of study characterizes this sequence in full volume. In the north, the Triassic deposits are underlain by the Nedubrovo Member; in the south (the Klyazma River basin), the sections are underlain by the Vyaznikovian Horizon. The Permian–Triassic boundary adopted in the General Stratigraphic Scale of Russia for continental deposits of the East European platform (the lower boundary of the Astashikha Member) is more ancient than the one adopted in the International Stratigraphic Chart. The same geological situation is observed in the German Basin and other localities where Triassic continental deposits are developed. The ways of solving this problem are discussed in this article.

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Keywords

entomofauna, macroflora, miospore com- plexes, ostracods, Permian, petromagnetism, terrestrial vertebrata, Triassic